

**Subject: glowbugs V1 #203**  
**glowbugs**                      **Wednesday, December 10 1997**                      **Volume 01 : Number 203**

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Date: Mon, 08 Dec 1997 11:30:17 +0000  
From: BOB DUCKWORTH <bob@atl.org>  
Subject: server back up

technical difficulty at remote site resolved.  
i was in dallas for three days and had no way to fix until  
this am  
- bob  
wb4mnf

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Date: Tue, 09 Dec 1997 11:42:39 -0600  
From: Conard Murray <cfm5723@ntech.edu>  
Subject: We're back!

Hi Gang,  
Looks like the list is back functional! Thanks to who ever fixed the  
problem!  
73 and ZUT!  
Conard, WS4S  
your friendly listowner

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Date: Sun, 07 Dec 1997 17:53:21 EST  
From: neis@juno.com (Larry Szendrei)  
Subject: "pencil" tubes

Season's Greetings, fellow thermionic emission enthusiasts,

Last Tuesday nite at the local ham radio club meeting I was given some  
"pencil" tubes and challenged to "build something" with them. Problem is,  
I have no specs or pinouts for these things. Can anybody help? All were  
made by Raytheon, and this is what I've got:

JRP5672 (Glass envelope)  
JRP1AD4 (Metal Envelope)  
JRP5678 (Metal Envelope)

Since this is a "contest" of sorts, I'd like to show up at the next  
meeting with, in the very least, a functional low-power xtal oscillator  
made with one or more of the above. Any assistance will be much  
appreciated.

Thanks,  
Larry (NEIS)

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Date: Tue, 9 Dec 1997 12:48:23 -0600  
From: w5hvv@aeneas.net (Roderick M. Fitz-Randolph)  
Subject: Parasitic Suppressor

I am in the process of building a VT-4-C (211) Hartley Oscillator  
transmitter and have only a few 2 watt composition resistors with  
which to build a parasitic suppressor for the plate. They are:

- 1 ea. 10 ohm 2 watt composition
- 2 ea. 15 ohm 2 watt composition
- 1 ea. 100 ohm 2 watt composition
- 1 ea. 150 ohm 2 watt composition

Since I don't have the foggiest idea where I can get any others,  
I am asking those of you that are knowledgeable about such things,  
which of these might make the best resistor around which to wind  
a coil for parasitic suppression on an 80 meter Hartley?

Also, would like to insert, close to the grid pin on the socket,  
another resistor to act as a parasitic suppressor. Which of those  
I have available would accomplish this?

My purpose is to make a vintage 211 Hartley Oscillator transmitter  
on an oak bread board and make it as close to the original open

breadboard design as I can and yet still have something that won't tear up everyone's TV set.

Any help will be appreciated.

Rod, N5HV  
w5hvv@aeneas.net

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Date: Tue, 9 Dec 1997 13:16:11 -0600  
From: "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>  
Subject: Test Msg, DO NOT READ

This is a test message. Don't send me any flame email,. I am trying to get rid of this dratted attachment problem and I need to send through the listserver to find out if I am successful.

Scott WA9WFA

Attachment Converted: "c:\eudora32\Attach\winmail23.dat"

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Date: Tue, 9 Dec 1997 11:58:05 -0800 (PST)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: Hello 1 2 3 4 5

> Test ....  
> Conard

Got it.

Ken

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Date: Tue, 9 Dec 1997 11:59:08 -0800 (PST)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: We're back!

> Hi Gang,  
> Looks like the list is back functional! Thanks to who ever fixed the  
> problem!  
> 73 and ZUT!  
> Conard, WS4S  
> your friendly listowner

Great! I will go ahead and configure Piobaire for the GB list, but won't activate it. Usually if you HAVE a backup, you never need it...

Ken

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Date: Tue, 9 Dec 1997 16:39:58 -0500 (EST)  
From: rdkeys@csemail.cropsci.ncsu.edu  
Subject: Re: Parasitic Suppressor

>  
> I am in the process of building a VT-4-C (211) Hartley Oscillator  
> transmitter and have only a few 2 watt composition resistors with  
> which to build a parasitic suppressor for the plate. They are:  
>  
> 1 ea. 10 ohm 2 watt composition  
> 2 ea. 15 ohm 2 watt composition  
> 1 ea. 100 ohm 2 watt composition  
> 1 ea. 150 ohm 2 watt composition  
>  
> Since I don't have the foggiest idea where I can get any others,  
> I am asking those of you that are knowledgeable about such things,  
> which of these might make the best resistor around which to wind  
> a coil for parasitic suppression on an 80 meter Hartley?

Actually, any of those values should work. I have always thought that just a few ohms was usually needed, hence would probably use the 10 or 15 ohm resistors, as ones of choice.

> Also, would like to insert, close to the grid pin on the socket,  
> another resistor to act as a parasitic suppressor. Which of those  
> I have available would accomplish this?

Only one parasitic suppressor is needed. Use it in the grid, with the two watt resistor and you should be able to make it work, just fine. On some of the old diagrams you will find a point marked ``X'' in the grid lead (as close to the tube as possible) where it usually went. If you were running a tptg or had paralleled or pp tubes, it might be advantageous to run two suppressors.

> My purpose is to make a vintage 211 Hartley Oscillator transmitter  
> on an oak bread board and make it as close to the original open  
> breadboard design as I can and yet still have something that won't  
> tear up everyone's TV set.

TVI is not usually a problem, because of the hi-C designs. But, fundamental overload can be a problem, in weak areas. The parasitic suppressor should handle any odd LC squirrelied. More importantly is probably the concept of using sufficient tuning to lopass or passband the antenna output. I prefer a series LC which is resonant at the band of choice, into a standard low-impedance load (coax, end fed 1/4 wave, open-line-fed antenna, etc.). A coax line to a standard pinet tuner will work fine, too (as will a breadboard pinet on a separate board on a longer mounting board). I have one tv set that is just above the Hartley that will get some tv off the line but not the coax (cable fed tv). Some judicious use of old ferrite cores helps there.

> Any help will be appreciated.  
>  
> Rod, N5HV  
> w5hvv@aeneas.net

Sounds like you are getting there, rather well!

Bob/NA4G

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Date: Tue, 9 Dec 1997 16:48:38 -0500 (EST)  
From: rdkeys@csemail.cropsu.ncsu.edu  
Subject: Re: "pencil" tubes

>  
> Season's Greetings, fellow thermionic emission enthusiasts,  
>  
> Last Tuesday nite at the local ham radio club meeting I was given some  
> "pencil" tubes and challenged to "build something" with them. Problem is,  
> I have no specs or pinouts for these things. Can anybody help? All were  
> made by Raytheon, and this is what I've got:  
>  
> JRP5672 (Glass envelope)

Dunno..... that is a 5672 tube.

> JRP1AD4 (Metal Envelope)

The 1AD4 is the standard pentode used in the old Motorola Dispatcher FM sets (last of the really funky looking art-deco all-set-to-take-off 50's toys). It should work fine as a normal pentode oscillator or amp or regen detector even. The metal envelope is a graphite coating of some sort, if memory serves me correctly, as a shield. Look in any of the old Motorola Dispatcher or portable fm manuals from about 1958 to 1960 or such for more info.

> JRP5678 (Metal Envelope)

Dunno..... that is a 5678 tube.

>  
> Since this is a "contest" of sorts, I'd like to show up at the next  
> meeting with, in the very least, a functional low-power xtal oscillator  
> made with one or more of the above. Any assistance will be much  
> appreciated.

Hey, use it as an ECO for a micromini tube set for 160 or 80 meters. Drop it in place of anywhere a 6L6 or 6F6 would be used and build it on a tin Suncrats box. Years ago, there was a 1 tube/1 xstor regennie called the ``wee-ciever'' in 73 or CQ built like that.

If it is round, and not flat, it might be a dualtriode, and could

be used as detector and audio in a micromini regennie.

> Thanks,  
> Larry (NE1S)

Good Luck, and keep us posted on how it works out, and whatever it becomes.....(:+)}....

Bob/NA4G

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Date: Tue, 09 Dec 1997 15:10:57 -0600  
From: Conard Murray <cfm5723@ntech.edu>  
Subject: test for scott "straight"

This is supposed straight text.  
Conard

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Date: Tue, 09 Dec 1997 15:13:44 -0600  
From: Conard Murray <cfm5723@ntech.edu>  
Subject: test for scott "HTML"

This is a multi-part message in MIME format.

- =====\_NextPart\_000\_005C\_01BD04B5.0A36D800  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

This should be in HTML and all sorts of colors.  
Conard

- =====\_NextPart\_000\_005C\_01BD04B5.0A36D800  
Content-Type: text/html;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

<!DOCTYPE HTML PUBLIC "-//W3C//DTD W3 HTML//EN">  
<HTML>  
<HEAD>

<META content=3D'"MSHTML 4.71.1712.3"' name=3DGENERATOR>  
</HEAD>  
<BODY>

<DIV>This <FONT color=3D#ff0000>should <FONT color=3D#00ff00>be in <FONT color=3D#ff00ff>HTML <FONT color=3D#00ffff>  
all <FONT color=3D#008080>sorts <FONT color=3D#800080>of =  
colors.</FONT></FONT></FONT></FONT></FONT></FONT><=  
/FONT></FONT></DIV>  
<DIV><FONT color=3D#ff0000><FONT color=3D#00ff00><FONT color=3D#00ffff><FONT color=3D#c0c0c0>Conard</FONT></FONT></F

- =====\_NextPart\_000\_005C\_01BD04B5.0A36D800--

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Date: Tue, 9 Dec 1997 17:05:12 -0800 (PST)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Regennies, etc..

1) Does anyone have schematics of their OWN regennies which they might  
mail to me for an SASE? Hand drawn is fine.

2) Bob Keys mentioned "...glass plate capacitors..." in one of his posts  
on Hartleys. How does one figure the capacitance, etc? Or do you just make  
some out of, say, 3" square glass plates and tin-foil, and measure them  
later?

Ken W7EKB

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Date: Tue, 9 Dec 1997 20:56:50 -0500 (EST)  
From: leel@digital.net (Leon Wiltsey)  
Subject: Re: new address

>>

>>Hi gang.  
Finally got my email address problem fixed.  
Anybody wishing to contact me use leel@digital .net.  
used to be leeboc@ct.net  
>>  
>>

Thank the good LORD for all that you have!!!

67yr old semi disabled senior            trying to get code speed to 13wpm  
(stroke got my eyesight, balance & coordination) SO ONLY BA'S NO SOLID STATE  
  
Leon (lee)   Wiltsey      4600 Lake Haven blvd      Sebring fl. 33872      KF4RCL TECK+

---

Date: Tue, 9 Dec 1997 21:07:01 EST  
From: EWoodman <EWoodman@aol.com>  
Subject: Are We Back??

Just saw Conard's test message. Are we up and running again??

Erid

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Date: Wed, 10 Dec 1997 10:45:20 +0100  
From: Jan Axing <janax@algonet.se>  
Subject: Re: Regennies, etc..

Ken Gordon wrote:

>  
> 1) Does anyone have schematics of their OWN regennies which they might  
> mail to me for an SASE? Hand drawn is fine.

I have mine on my glowbugs page <http://www.algonet.se/~janax/glowbug.htm>  
It ain't quite ready yet but works fairly well.

>  
> 2) Bob Keys mentioned "...glass plate capacitors..." in one of his posts  
> on Hartleys. How does one figure the capacitance, etc? Or do you just make  
> some out of, say, 3" square glass plates and tin-foil, and measure them  
> later?

If we can determine the relative dielectric constant for typical glass, we  
can calculate the capacity, perhaps capacity per sq. inch with a given  
glass thickness. I'll look in some books here and see if I can find something.

Jan, SM5GNN

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Date: Fri, 5 Dec 1997 12:16:22 -0500 (EST)  
From: "Roberta J. Barmore" <rbarmore@indy.net>  
Subject: Testing 01As in a Hickock

Hi, Gang!

A little problem has cropped up, trying to check out some condition  
unknown 01As and (oh, the horror!) I haven't got a listing of settings for  
'em for the Hickok 533A. Settings from a 535, 600A, or 605A will do, they  
all used the same roll-chart. (Frustrating, between two roll charts, a  
"supplement" and the official obsolete tube listing, there's no mention of  
01A I can find!)

The project at hand (and cause of my correspondence being so laggard,  
apologies to everyone I owe private e-mail) is the construction of a  
breadboard TNT rig. Got the bug pretty bad when folks were talking about  
the AWA contest. (May not make that'n, have to work overnight tonight and  
it usually messes up the weekend). Why a TNT and not a Hartley? Well, I  
built Hartleys 20+ years ago; never tried a TNT. Will it work? I dunno.  
I do have one '10 (thanks, Tom Adams!) but the use of 15 9V batteries for  
the B supply makes an 01A a better choice. (It's also a little easier to  
light them up!) Almost borrowed a shoulderless '45 (the "S" envelope)  
from the old RCA Radiola but thought better of it; if anything happened it  
would be difficult to replace exactly.

...Hoping the Pilot staright-line-frequency variable condenser will  
work all right; the only other 500pF condensers on hand are modern Johnson

types, long and skinny and a little too new-looking for the project!

73,  
--Bobbi

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Date: Wed, 10 Dec 1997 07:31:18 -0800 (PST)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Re: Regennies, etc..

> If we can determine the relative dielectric constant for typical glass, we  
> can calculate the capacity, perhaps capacity per sq. inch with a given  
> glass thickness. I'll look in some books here and see if I can find something.

Thanks, we await the results of your research.

Ken

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Date: Wed, 10 Dec 1997 07:45:31 -0800 (PST)  
From: Ken Gordon <keng@uidaho.edu>  
Subject: Regenny...

I have redrawn and submitted the Jones "One-Tube" regen rx to my (as yet unfinished) web page for your perusal and comments.

URL is:

<http://www.mines.uidaho.edu/~keng/schematics/jonesregen/>

I am working on getting some better software so that my scanned copies don't lose so much resolution when resized to fit the screen.

In any case, these can all be printed off directly from your browser.

For the Jones regen, I suggested a 1G6 since its specs match as closely as I could come up with, the specs of the original #19, but with a 1.5 volt filament so you won't have to use a filament rheostat.

Description and links back to the home page will follow ASAP.

I also made ONE change in the W5TVW PP rig suggested by Sandy: the 6.8 k 2 watt resistor has been changed to 6.8K 5 watts.

Again, the URL for THAT rig is:

<http://www.mines.uidaho.edu/~keng/schematics/w5tvw/>

Ken W7EKB

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Date: Wed, 10 Dec 1997 10:34:10 -0600  
From: w5hvv@aeneas.net (Roderick M. Fitz-Randolph)  
Subject: Hartley Grid Resistor

Well, folks... if ignorance is bliss, I must be the happiest guy in the world.

Following suggestions regards the wattage of a grid resistor for a Hartley, I ordered a variable 25K lug resistor (225 watts), thinking that if dissipated heat might in any way affect the resistance and therefore possibly the frequency, I would "gold plate" this baby and buy the biggest variable resistor available.

Well, it just arrived from Mouser Electronics and the humongous Moger is 10 1/2" long and 1 1/8" in diameter!!!! Am I blissful, or what?

Will order their 100 watt unit and see if it will fit on my Oak bread board a little better. Anyone need a humongous Ohmite vitreous enamel variable 50K ohm resistor. I paid \$20+ to have it delivered. Will sell it for \$10 (with the end-holders) to whomever needs something like this. Anyone making an 833 Hartley?

Rod, N5HV  
w5hvv@aeneas.net

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Date: Wed, 10 Dec 1997 12:06:58 -0500  
From: "Ornitz, Barry L" <ornitz@eastman.com>  
Subject: Parallel Plate Capacitors

To a first approximation, the capacitance of a parallel plate capacitor is:

$$C = E * A / t$$

where: E (epsilon) = permittivity of material between the plates  
A = area of plates (assumed equal on both sides)  
t = separation between the plates

and: E = Eo \* K  
where: Eo = permittivity of vacuum = (8.842E-12 farads/meter)  
K = dielectric constant of the insulating material.

The dielectric constant will depend on the type of glass used. For ordinary soda-lime glass, it is about 8.3; for Pyrex it is about 4.8; and for quartz the dielectric constant is 3.85.

Some other dielectric constants to remember are:

air - 1.000  
teflon - 2.1  
polyethylene - 2.26  
ruby mica - 5.4

Remember when calculating the capacitance, all the units must be correct. Thus the area and thickness will normally be measured in m<sup>2</sup> and m. In calculating the capacitance of air variable capacitors, this formula will produce capacitance values which are slightly low due to end effects and the effect caused by the rotor shaft.

73, Barry L. Ornitz WA4VZQ ornitz@tricon.net  
>From: Ken Gordon [SMTP:keng@uidaho.edu]  
>2) Bob Keys mentioned "...glass plate capacitors..." in one of his posts  
>on Hartleys. How does one figure the capacitance, etc? Or do you just make  
>some out of, say, 3" square glass plates and tin-foil, and measure them  
>later?  
>  
>Ken W7EKB  
>

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Date: Wed, 10 Dec 1997 11:05:55 -0700  
From: Dexter Francis <cwest@xmission.com>  
Subject: Re: Parallel Plate Capacitors

I've had lots of fun making parallel plate caps out of adhesive backed copper foil tape. (You can solder to it!) 3M still sells gives rolls of it away in their EMI suppression kits. The last ones I made were for a little crystal radio project for my son.

BTW I bought one of the Tenma LCR meters from MCM and it's a terrific unit for the money (\$100). I'd bought one from TechAmerica a while back and the darn thing was useless below 40 pf. It had no zero capability and never showed less than about 60 pf regardless. I was very disappointed as it was made in the USA and I expected better.

- df

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Need to Buy or Sell Tubes, Parts or BA Gear?  
Visit our Web site at <http://www.xmission.com/~cwest/>  
e-mail to: tubes@usa.net -or- cwest@xmission.com  
P.O. Box 22443, Salt Lake City, Utah 84122

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End of glowbugs V1 #203  
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